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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/996,713 | 11/30/2001 | Cha-Bong Choi | P-0289 | 3691 |
| 34610 | 7590 | 12/05/2003 | | |
| FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153 | | | EXAMINER CZEKAJ, DAVID J | |
| | | | ART UNIT 2613 | PAPER NUMBER 3 |
| DATE MAILED: 12/05/2003 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/996,713

Applicant(s)

CHOI, CHA-BONG

Examiner

Dave Czekaj

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

On page 2, line 18, the examiner understood the "camera module 102A" to be the "camera module 102".

On page 3, line 8, the examiner understood the "LCD 103B" to be the "LCD 103A".

On page 7, line 7, the examiner notes that item 206 points to the direction display processing unit not the "encoding processing process".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 6-8, 10, 16, 19, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Irube et al. (2001/0041586), (hereinafter referred to as "Irube") in view of Rossi et al. (5672820), (hereinafter referred to as "Rossi").

Regarding claims 1, 10, and 19, Irube discloses a communication terminal apparatus combined with a handset with high probability (Irube: paragraph 0001, lines 1-3). This apparatus comprises a "codec for performing converting operation between analogue voice data and digital voice data" (Irube: figure 1,

item 23, wherein the voice codec is the codec), "camera module for performing converting operation between analogue image data and digital image data" (Irube: figure 1, items 4 and 25), "voice/image communication apparatus for multiplexing or demultiplexing the converted voice, image, direction data, and frame" (Irube: figure 1, items 17 and 20, wherein the multiplexer/demultiplexer are part of the communication apparatus, paragraph 0113, lines 1-4, wherein the frame is a combination of the voice, video, and direction or other data), "LCD module for displaying image and direction data" (Irube: figure 1, items 14, 16, and 28, wherein the camera direction sensor unit provides the direction data and the video encoder provides the image data), and a "control unit for controlling each unit generally" (Irube: figure 1, item 11). Although Irube fails to show a direction sensor for detecting the direction of a photographing object as disclosed, Irube does show a camera direction sensor unit (Irube: figure 1, item 28) for detecting the presence of the camera (Irube: paragraph 0047, lines 18-19). Rossi teaches that angles, compass headings, and GPS coordinates, along with a camera, can be used to determine the objects location or direction (Rossi: column 4, lines 1-36). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to implement the camera direction sensor unit disclosed by Irube with the angle, compass, and GPS coordinates taught by Rossi in order to obtain an apparatus that more precisely locates the direction of an object. Further, one would be motivated to do so since Irube is silent as to how the object location is determined.

Regarding claim 2, Rossi discloses "the direction sensor detects a direction of a photographing object, which is identical with a photographing direction of the camera" (Rossi: figure 2, wherein the direction sensor is the unit (50), the camera is the pointing device (52) which determines the direction of the object using GPS, angles, and a compass sensor).

Regarding claim 3, see the examiners comments for claim 1 and note that in the combination of Irube and Rossi as applied to claim 1, Irube discloses a "voice encoding processing unit for encoding the voice data input from the codec" (Irube: figure 1, items 23 and 27, wherein the video encoder receives and encodes the voice data from the voice codec", "image encoding processing unit for encoding the image data" (Irube: figure 1, item 27, wherein the image encoder is the video encoder), and multiplexing unit for multiplexing the voice, image, and direction data" (Irube: figure 1, items 17 and 20). Rossi discloses "encoding the direction data" (Rossi: figure 5, item 30, wherein the direction data is obtained from the angular measuring system and the receiving module).

Regarding claims 4 and 21, Rossi discloses "calculating the direction and angle of a photographing object on the basis of direct north and south and encodes the data of calculated direction and angle" (Rossi: column 4, lines 20-36, wherein the angle is composed of the three angles α , β , and γ , the compass sensor provides direct north referencing, figure 2, item 30, wherein the encoder encodes the angle and direction data).

Regarding claims 6, Rossi discloses "displaying a direction on the screen in the form of on-screen" (Rossi: figure 5, item 48, wherein the display displays the direction).

Regarding claims 7 and 16, although not shown, it would have been obvious to display the direction on the screen in the form of a compass (Official Notice). Doing so would have been obvious to make the direction easier to view and read.

Regarding claims 8 and 20, see the examiners comments for claim 1 and note that in the combination of Irube and Rossi as applied to claim 1, Irube discloses that the "multiplexing unit multiplexes the encoded packet data by receiving data from the voice, image, and direction units and inputs the data to the image frame by forming a flag and header" (Irube: figure 1, items 27, 28, 23, 17, and 20, wherein the multiplexer multiplexes data from the video encoder, voice codec, and camera direction unit, figure 12 and paragraph 0039, line 7, wherein the voice/video conversation appears to be in the flag/header format which would comply with the MPEG 4 standards disclosed by Irube).

Regarding claim 22, Rossi discloses that the "direction and angle data are formatted and displayed" (Rossi: figure 2, wherein the direction and angle data are formatted to fit in the map and are then displayed).

4. Claims 9, 11, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Irube et al. (2001/0041586), (hereinafter referred to as "Irube") in view of Rossi et

al. (5672820), (hereinafter referred to as "Rossi") in further view of Takahashi et al. (6516094), (hereinafter referred to as "Takahashi").

Regarding claims 9, 11, and 23, Irube discloses a communication terminal apparatus combined with a handset with high probability (Irube: paragraph 0001, lines 1-3). This apparatus comprises a "codec for performing converting operation between analogue voice data and digital voice data" (Irube: figure 1, item 23, wherein the voice codec is the codec), "camera module for performing converting operation between analogue image data and digital image data" (Irube: figure 1, items 4 and 25), "voice/image communication apparatus for multiplexing or demultiplexing the converted voice, image, direction data, and frame" (Irube: figure 1, items 17 and 20, wherein the multiplexer/demultiplexer are part of the communication apparatus, paragraph 0113, lines 1-4, wherein the frame is a combination of the voice, video, and direction or other data), "LCD module for displaying image and direction data" (Irube: figure 1, items 14, 16, and 28, wherein the camera direction sensor unit provides the direction data and the video encoder provides the image data), and a "control unit for controlling each unit generally" (Irube: figure 1, item 11). Although Irube fails to show a direction sensor for detecting the direction of a photographing object and the formation of null data as disclosed, Irube does show a camera direction sensor unit (Irube: figure 1, item 28) for detecting the presence of the camera (Irube: paragraph 0047, lines 18-19). Rossi teaches that angles, compass headings, and GPS coordinates, along with a camera, can be used to determine the objects

location or direction (Rossi: column 4, lines 1-36). Takahashi teaches that when a reference region is not described, i.e. no information/data is contained on the reference region, null data is formed and inserted into the description region (Takahashi: figure 5d, column 6, lines 55-61). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to implement the camera direction sensor unit disclosed by Irube with the angle, compass, and GPS coordinates taught by Rossi, and add the formation of null data taught by Takahashi in order to obtain an apparatus that more precisely locates the direction of an object. Further, one would be motivated to do so since Irube is silent as to how the object location is determined.

5. Claims 5, 12-15, and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Irube et al. (2001/0041586), (hereinafter referred to as "Irube") in view of Rossi et al. (5672820), (hereinafter referred to as "Rossi") in further view of Rudow et al. (6236940), (hereinafter referred to as "Rudow").

Regarding claims 5 and 14, Irube discloses a communication terminal apparatus combined with a handset with high probability (Irube: paragraph 0001, lines 1-3). This apparatus comprises a "codec for performing converting operation between analogue voice data and digital voice data" (Irube: figure 1, item 23, wherein the voice codec is the codec), "camera module for performing converting operation between analogue image data and digital image data" (Irube: figure 1, items 4 and 25), "voice/image communication apparatus for multiplexing or demultiplexing the converted voice, image, direction data, and

frame" (Irube: figure 1, items 17 and 20, wherein the multiplexer/demultiplexer are part of the communication apparatus, paragraph 0113, lines 1-4, wherein the frame is a combination of the voice, video, and direction or other data), "LCD module for displaying image and direction data" (Irube: figure 1, items 14, 16, and 28, wherein the camera direction sensor unit provides the direction data and the video encoder provides the image data, column 4, lines 1-3), and a "control unit for controlling each unit generally" (Irube: figure 1, item 11). Although Irube fails to show a direction sensor for detecting the direction of a photographing object and having a displaying area on one side of the screen as disclosed, Irube does show a camera direction sensor unit (Irube: figure 1, item 28) for detecting the presence of the camera (Irube: paragraph 0047, lines 18-19). Rossi teaches that angles, compass headings, and GPS coordinates, along with a camera, can be used to determine the objects location or direction (Rossi: column 4, lines 1-36). Rudow teaches that having the direction, or position, of a golfer on one side of the screen enables more information to be displayed elsewhere (Rudow: figure 12, column 61, lines 55-65, wherein having the golfers direction displayed in the corner of the screen enables the hole information to be displayed as well, as opposed to having the golfers position take up the entire screen). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to implement the camera direction sensor unit disclosed by Irube with the angle, compass, and GPS coordinates taught by Rossi, and add the display means taught by Rudow in order to obtain an apparatus that more

precisely locates and displays the direction of an object. Further, one would be motivated to do so since Irube is silent as to how the object location is determined.

Regarding claim 12, see the examiners comments for claim 5 and note that in the combination of Irube, Rossi, and Rudow as applied to claim 5, Irube discloses "detecting the data demultiplexed image and direction data and transmitting to the displaying unit" (Irube: figure 1, paragraph 0113) and Rudow discloses "checking whether a direction displaying mode is set" (Rudow: figure 6, wherein the list of menu choices on the right, i.e. 1-9, sets the hole to be displayed), "determining the position and method in displaying the direction and image data on the LCD if direction mode is set" (Rudow: figures 6 and 20, wherein the position is determined with the aid of GPS data, column 4, lines 1-3), and "displaying the direction and image on the LCD" (Rudow: figures 6 and 20).

Regarding claim 13, Rudow discloses "the LCD displays only image data read from the LCD module in the direction displaying mode is not set" (Rudow: column 10, lines 34-38, wherein pop up windows or other various messages are displayed on the screen, column 4, lines 1-3).

Regarding claim 15, Rossi discloses "displaying a direction on the screen in the form of on-screen" (Rossi: figure 5, item 48, wherein the display displays the direction).

Regarding claim 17, Irube discloses "displaying step is also adapted in case the transmitted image frame is a stop image" (Irube: figure 12, wherein the End Negotiation frame is the stop image).

Regarding claim 18, Rudow discloses "the LCD is further set to display time and date information" (Rudow: figure 20, column 5, lines 62-64, wherein it is determined, from the GPS satellites, the dates of the games played, column 4, lines 1-3).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

| | | |
|------------|---------|--------------------|
| US-5900909 | 05-1999 | Parulski et al. |
| US-6449011 | 09-2002 | Muramatsu et al. |
| US-5579535 | 11-1996 | Orien et al. |
| US-6133947 | 10-2000 | Mikuni, Shin |
| US-5892855 | 04-1999 | Kakinami et al. |
| US-6359571 | 03-2002 | Endo et al. |
| US-6292215 | 09-2001 | Vincent, Robert S. |


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave Czekaj whose telephone number is (703) 305-3418. The examiner can normally be reached on Monday - Friday 9 hours.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (703) 305-4856. The fax phone number for the organization where this application or proceeding is assigned is (703) 872 9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.


CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
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